



Local Energy Communities: a vehicle for islands' energy transition?



Success stories from e-Mobility Communities and Energy in Crete

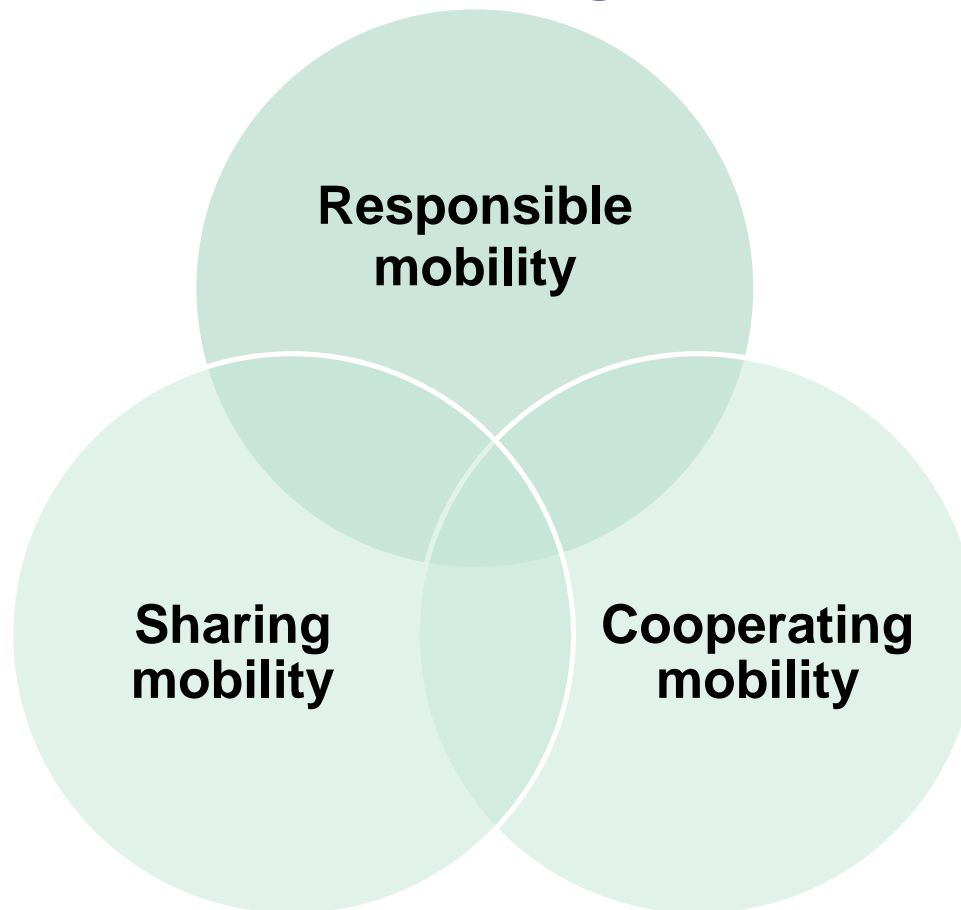
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Communities approach for e-mobility challenges



CLEAN VEHICLES

Uptake of electric vehicles by fleet operators

- Meetings with fleet operators (car rental-taxi fleets)
- Cooperation with car rental companies and taxi fleets
- Siting of proper charging points
- First public EV charging points in the region (2 in hotels areas, one in the city center, 2 in the main parking sites at the city gateways).
- Demo PV powered charging
- Parking privileges for EVs
- Raising acceptance of EVs. Campaign
- Evaluation of impact



Expected Impacts

- ✓ solar electricity generation: 51.000 kWh/year
- ✓ avoided due to solar electricity: 50.439 kg CO₂eq/year
- ✓ Increase the use of hybrid and e-vehicles by +20%
- ✓ 20.000 citizens reached
- ✓ 8 more municipalities learn from results



CLEAN VEHICLES

Introducing Electric vehicles for Public Transport



- Purchase of 1 electric mini bus, accessible to people with disabilities
- Testing and demonstration on a “hop on hop off” service in the city landmarks to serve access the beach
- Promote the use of PT e-vehicles from residents / visitors as replacement of private cars
- Examine cooperative business model involving tourism actors and PT operators
- Share experience/results to promote replication in other Greek cities



Expected Impacts

- Noise reduction by 15% in the operating area
- Reduction of GHG emissions (CO₂eq): 10.036 kg CO₂eq/y
- Energy savings: 20.736 kWh/year
- Number of tourists route using the e-buses: 20.000

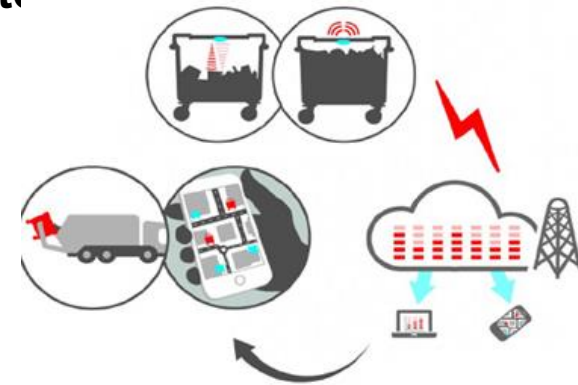


ALTERNATIVE FUELS - Business case in UCO to Biodiesel chain Cooperative Mobility

Promote a cooperative business model to **set up and operate of a UCO-to-biodiesel full chain** for cleaner fuelled fleet.

- > Feasibility study for a cooperative business case (private-public-crowdfunding).
- > Expansion of collection points network, smart sensors
- > **Demonstration project** of the full UCO-to-biodiesel chain with an urban waste collection truck
- > Promotional campaign to households and HORECA.

Current Status: Campaign to boost UCO collection for biodiesel production in schools - pilot project, including some containers in public spaces and schools.



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Building a sharing mobility culture

- Launch the sharing approach in local/regional mobility. Research to define users profiles/motivation and constraints.
- Launch and operate an online platform promoting integrated shared mobility services for a mix of modes – car sharing/pooling, taxis, bicycles and e-bikes
- campaign to promote the platform use; car sharing mobile phone application (Web based) demonstrated
- Engagement of tour operators, hotel booking services, charter and “vacation” flights operators, ferries to promote the esharing platform;
- Inclusion of e-bikes to the existing bike sharing network.
Expansion of the public bike stations network



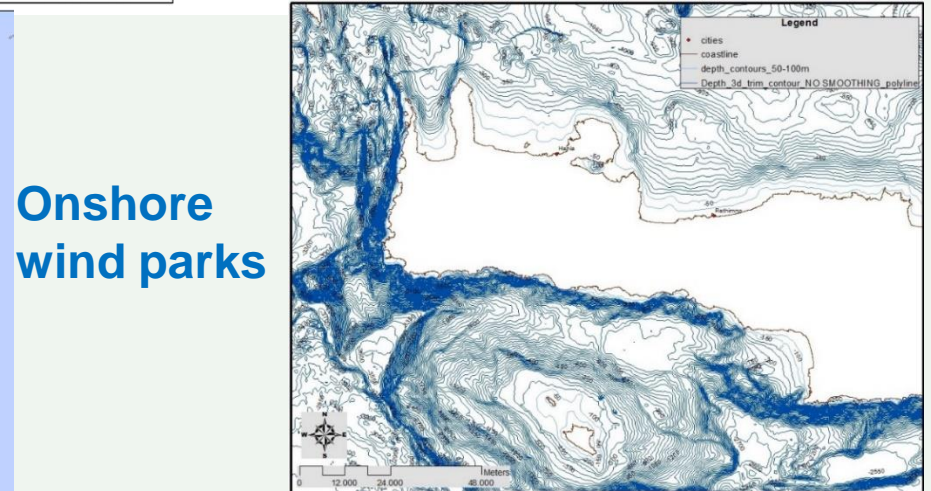
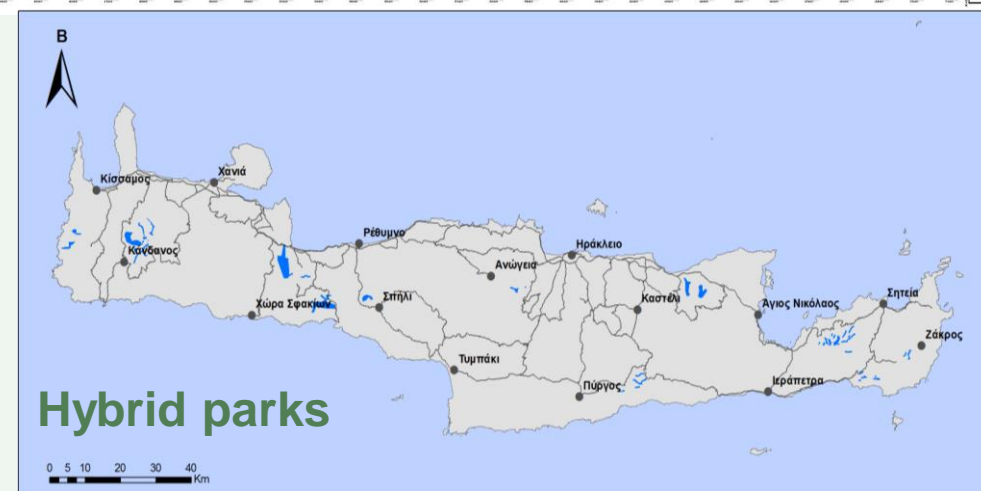
Expected Impacts

- ✓ Energy saving: 61.815.019 kWh/year
- ✓ Reduction of GHG emissions (CO₂eq): 878.481 kg CO₂eq/year
- ✓ Increase by 25% of the citizens using sustainable mobility modes
- ✓ 20% of hotel employees shift to sharing mobility modes



Sustainable siting of RESe Parks

Exploitable potential



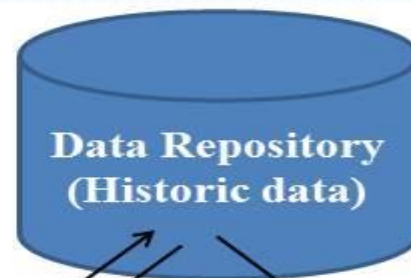
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Field Level



Data Monitoring



Data Repository
(Historic data)

Data of Supplying REScoops

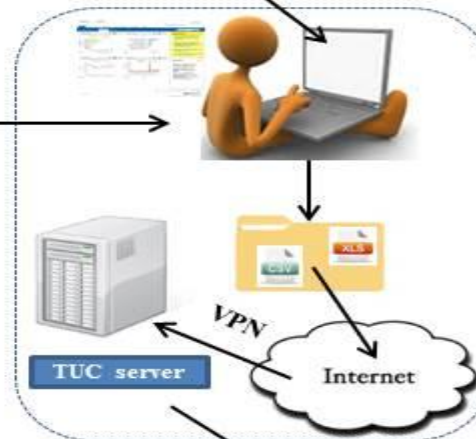
**Current State of Data
(Measurement Details)**

- Production Data
- Consumption Data
- Energy Pricing/Billing Data
- Indoor Ambience
- Meteorological Data
- Data Pre-Processing
- Population Division
-

- Questionnaires
- Group Meetings
- Online Interviews



Consideration of a common data format and inventory-related issues
with collaborating REScoops.



Knowledge

Statistical Analysis

Results
evaluation

✓ ANOVA

... in the cases
this was
meaningful.

✓ Calculation of typical
values

- Identification of explanatory
and confounding variables
- Normalization with respect to
identified correlations

Pre-processing steps

- ✓ Completion of important missing
values
- ✓ Population division (clustering)
 - Cooperative membership
 - Type of EE intervention applied
 - Contract types
 - Prosumers



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THANK YOU FOR YOUR ATTENTION!

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